The Water Utility Enterprise

Final-June 1980

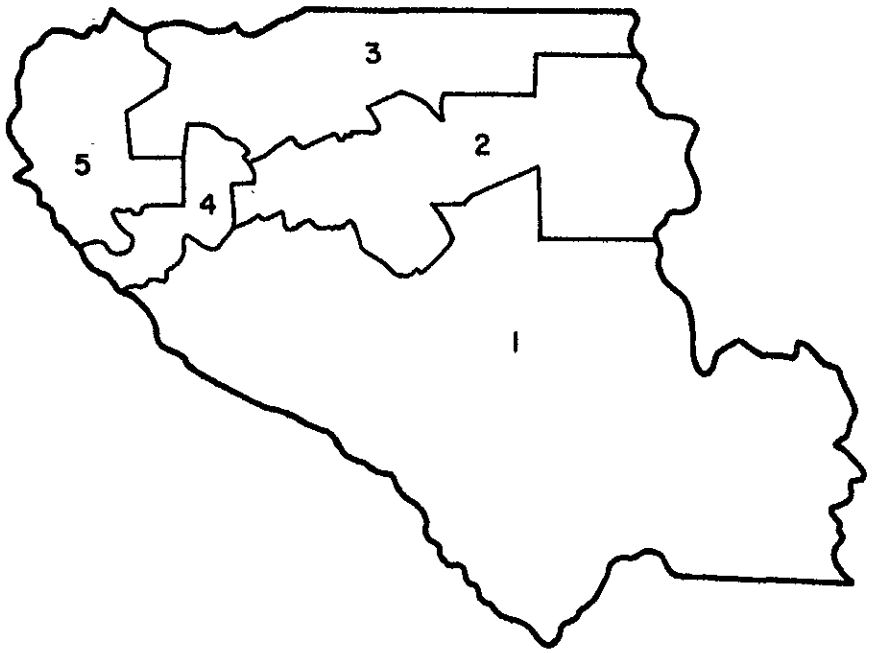
Santa Clara Valley Water District



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WATER DISTRICT
5750 Almaden Expressway
San Jose, California 95118



DIRECTORIAL DISTRICTS

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In 1978-79 water supply was not sufficient to meet needs in the northern part of the District. Even though the year's rainfall was near normal, it was necessary to draw on groundwater basin and surface reservoir storage. Overall water use in the northern part of the District exceeded supplies by about 44,000 acre-feet for the year. Water supply and use were in approximate balance in the southern part of the District.

In January of 1979 the U.S. Water and Power Resources Service (formerly U.S. Bureau of Reclamation) awarded a contract to construct the Pacheco Tunnel, a major feature of the San Felipe Division. Also in 1978-79, the District commenced design work on both the Almaden Valley II and Cross Valley Pipelines and advertised for bids to construct Phase 1 of the Cross Valley Pipeline.

During the current fiscal year, 1979-80, the District is continuing design on the Cross Valley and Almaden Valley II Pipelines, and has begun preliminary design work on the Rinconada Water Treatment Plant expansion. It sold revenue bonds in the amount of $21,000,000 in April of 1980, a major portion of which will be used to finance construction of the Almaden Valley II Pipeline. The first major contract for this project was awarded on April 15, 1980. Also in 1979-80 the District revised its pricing policy on the In-County Credit in response to changes brought about by Proposition 13. Under the revised policy, the tax credit for 1979-80 and 1980-81 is based on a unit payment to designated agencies of $7.50 per acre-foot of Hetch Hetchy water each agency imports into the District.

Looking ahead, 1980-81 will be the first year under the Gann Initiative. The projected revenue and expenses for 1980-81 are in compliance with that initiative. During 1980-81 it is anticipated that construction of the Almaden Valley II and Cross Valley Pipelines, and design of the expansion of the Rinconada Water Treatment Plant will continue.

Following meetings with the local retail water agencies, the Water Commission, the Agricultural Water Advisory Committee and after conducting a public hearing, the District's Board of Directors on May 27, 1980 adopted a revised water rate structure for fiscal year 1980-81. This rate structure includes a $10 per acre-foot increase in the basic user charge for M&I water, a $2.50 per acre-foot increase in the basic user charge for agricultural water and the levy of a countywide ad valorem tax to pay part of the charges for the South Bay Aqueduct that will generate $1,875,000.

The water rates adopted by the Board of Directors for 1980-81 are $54 per acre-foot for municipal and industrial water and $13.50 per acre-foot for agricultural water in Zones W-2, W-3.1, W-3.2, W-3.3, and W-3.5. The Treated Water surcharge will remain at $41 per acre-foot. No charges will be levied in Zones W-5 and W-6 next year.

John T. O'Halloran
General Manager

AN AFFIRMATIVE ACTION EMPLOYER

This is the ninth annual report on the status of the Santa Clara Valley Water District's Water Utility Enterprise. The purpose of this report is to provide information on the following items:

- Current and future water requirements of Santa Clara County
- Current and future water supply available to meet those requirements
- Future capital improvements needs
- Future financial needs of the Water Utility Enterprise including expenditures and a means of financing them
- Water charges to be levied in any zone or zones of the District for the next fiscal year

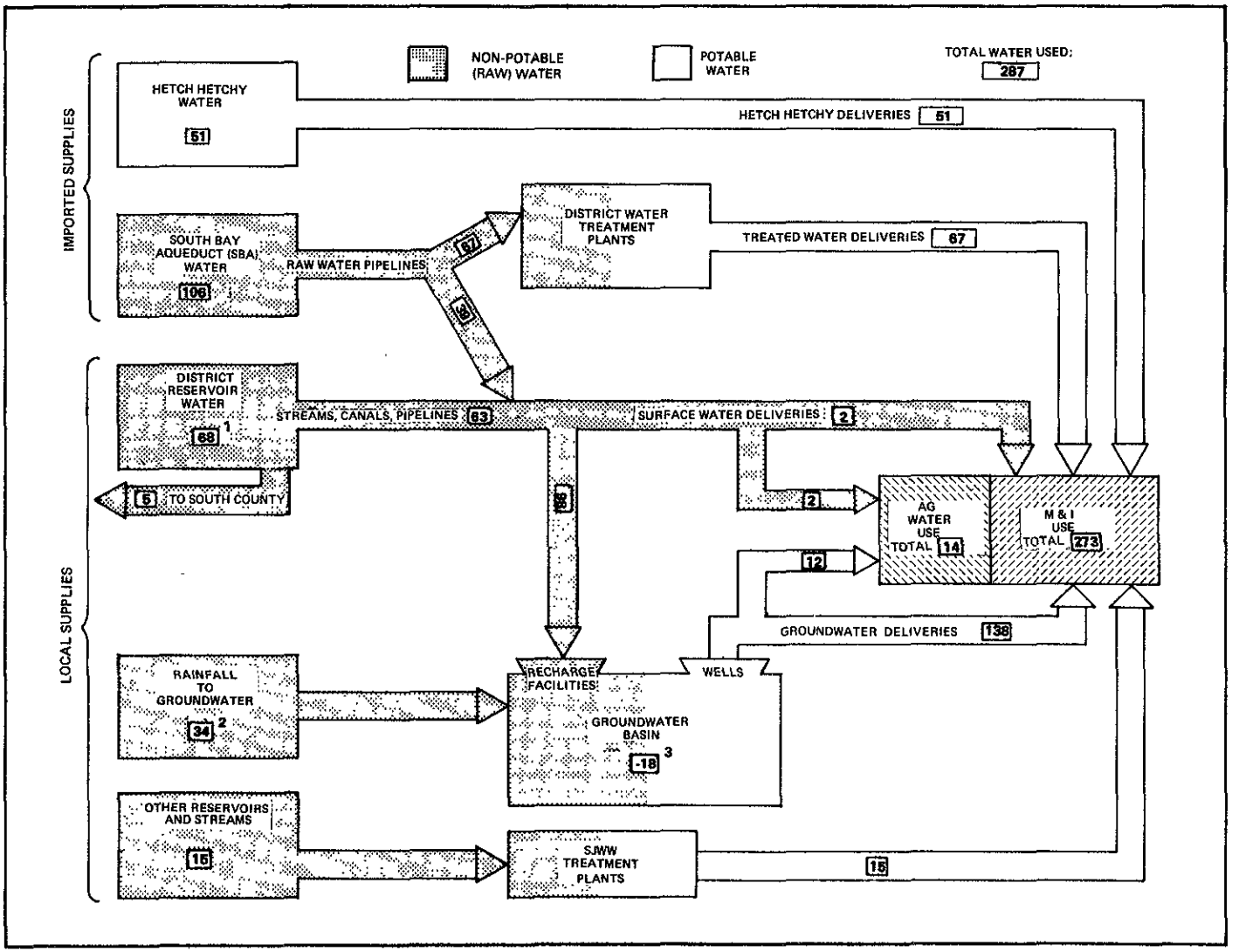
1978-79 Water Picture...

Although 1978-79 was a near normal rainfall season in Santa Clara County, the runoff was less than normal and thus the water supply was less than projected for an average water year.

The diagram at the right summarizes the water supply and use for 1978-79 in North Santa Clara County. As shown, the water use was about 287,000 acre-feet as compared to a water supply of 243,000 acre-feet. This resulted in a net decrease in groundwater basin and surface reservoir storage of about 44,000 acre-feet.

Municipal and industrial water use for North County was about 22 percent higher than in the previous year, while agricultural water use was about 14 percent less than in the previous year.

WATER SUPPLY AND USE
NORTH SANTA CLARA COUNTY
1978-79
(All values in 1,000 Acre-Feet)



1. Includes 26,000 acre-feet of carryover storage from previous years.
2. Includes unmeasurable subsurface inflow.
3. 18,000 acre-feet was withdrawn from storage in the Santa Clara Valley Groundwater Sub Basin.

Water Use...

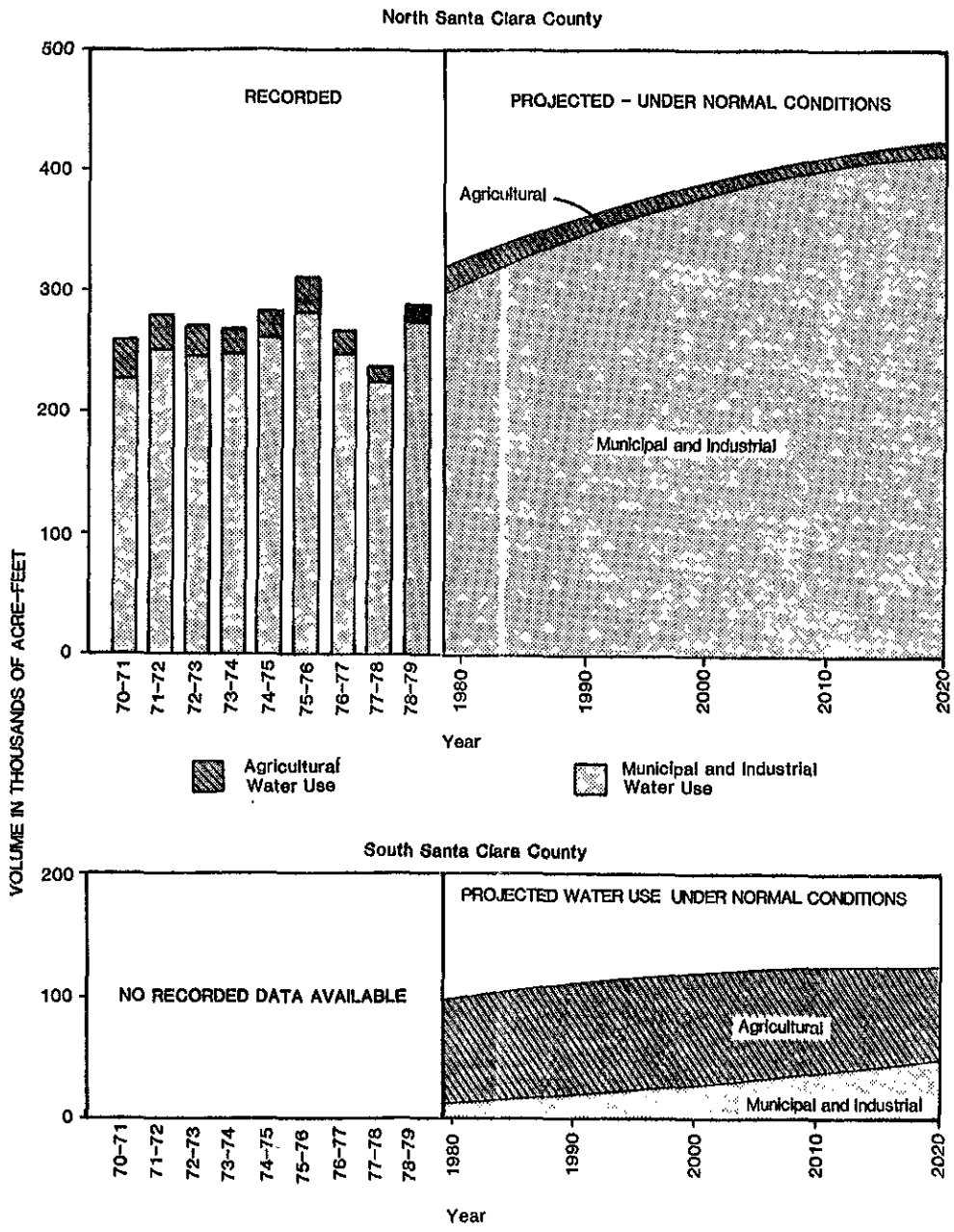
Water use in Santa Clara County is categorized as either agricultural or municipal and industrial. Recorded North County water use for the period 1970-71 through 1978-79 is shown to the right.

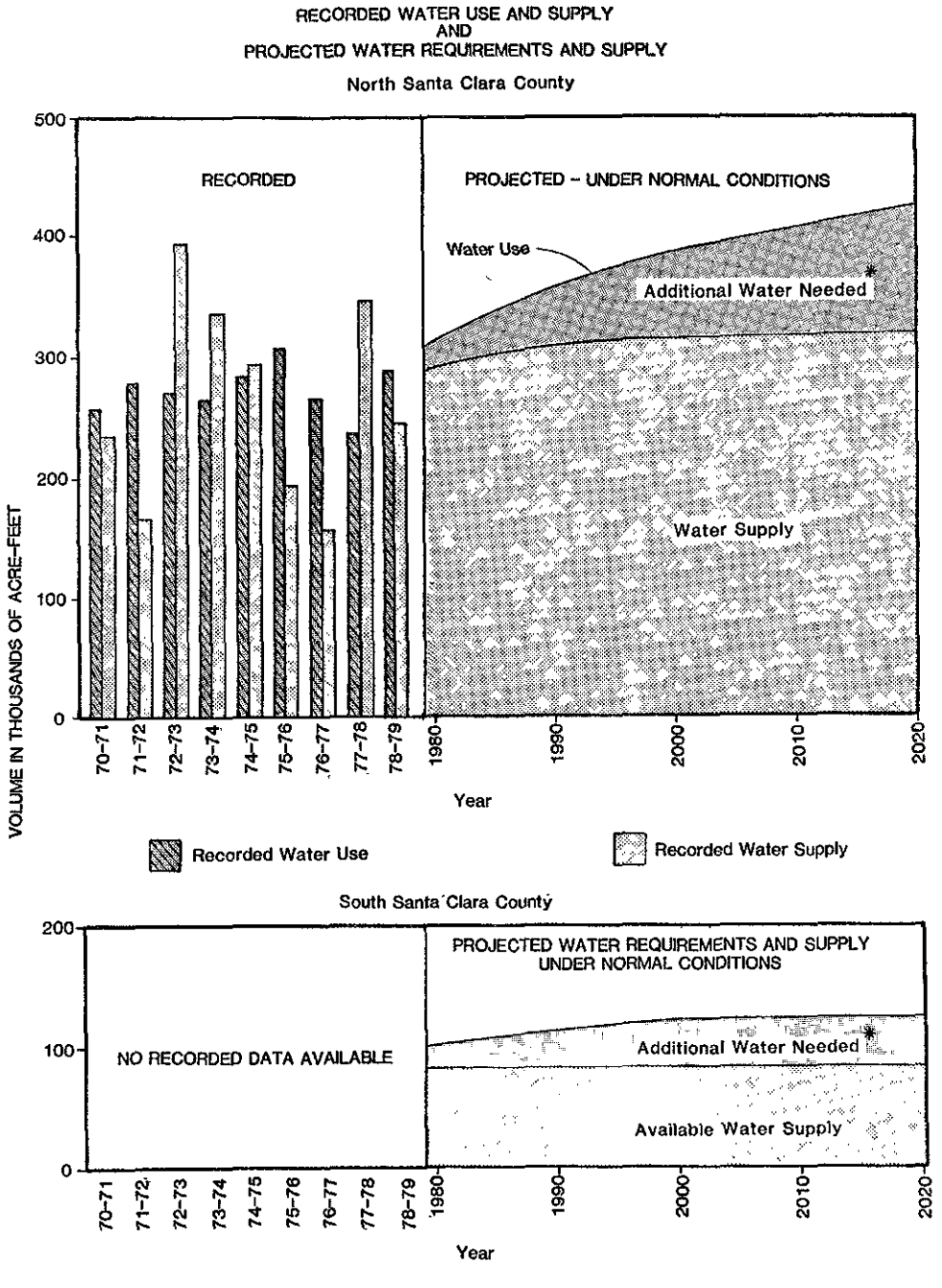
Projections of future water use in North Santa Clara County as shown to the right indicate a long-term average increase through 1995 when the rate of increase will begin to gradually decrease. Although agricultural requirements are gradually decreasing, the total water demand is expected to reach 420,000 acre-feet per year in 2020 due to increasing industrial and residential requirements.

Water use in South Santa Clara County, the area south of Metcalf Road, has been primarily agricultural and has been met by available local supplies, mainly from groundwater pumping. In South Santa Clara County, it is anticipated that municipal and industrial water requirements will continue to increase while agricultural requirements will decrease. Total annual water use in South Santa Clara County is projected to increase to about 125,000 acre-feet by 2020.

Presently, portions of Zone W-5 in the South County do not have a formal groundwater production measurement program. All estimates of water use have been based on land use and can only be considered approximate.

RECORDED AND PROJECTED WATER USE





*Additional water needed to be supplied from reclaimed wastewater projects and the San Felipe Division, Central Valley Project

Present sources of water supply in North Santa Clara County consist of locally conserved water and water imported from the Hetch Hetchy and South Bay Aqueducts. The annual water supply available in North Santa Clara County since 1970-71 is shown to the left.

In 1978-79, the water supply in North County was less than average even though rainfall was near normal for the year. During this period, about 44,000 acre-feet of water were withdrawn from reserves in the groundwater subbasin and surface reservoirs to meet the annual water needs.

As shown in the graphs on the left, projected average water use is expected to exceed normal available water supplies on a yearly basis. As a result, the groundwater subbasins in the County will function in a water-deficit condition until supplemental water is available from the San Felipe Division, CVP, in the late 1980's. In the meantime, it may become necessary to increase use of reclaimed wastewater and to intensify the District's local water conservation program to avoid excessive mining of the groundwater subbasins until the new supply of water is available.

In-County Water Distribution System...

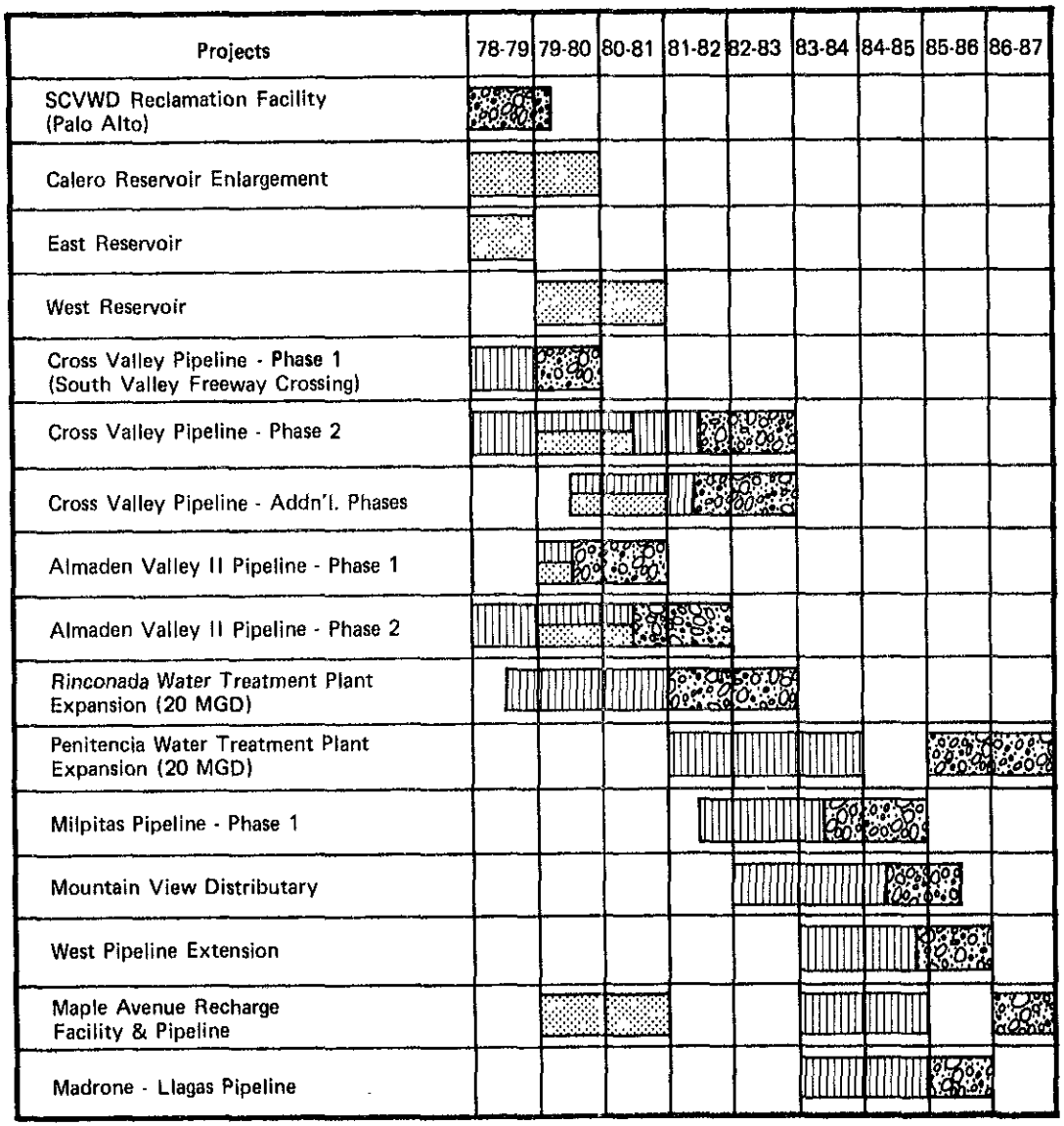
To adequately meet the projected water needs of the County, it is necessary to expand the In-County Distribution System by constructing several major new facilities. Since publication of its Master Plan, the District has updated its projected new facility construction program. Due to a modification in the Treated Water Contractor's peaking requirements, construction of the East Reservoir, the West Reservoir and the Parallel West Pipeline have been postponed from Stage I to Stage II.

The table to the right shows the current schedule for land acquisition, project planning and design and construction of the proposed Stage I facilities through 1986-87.

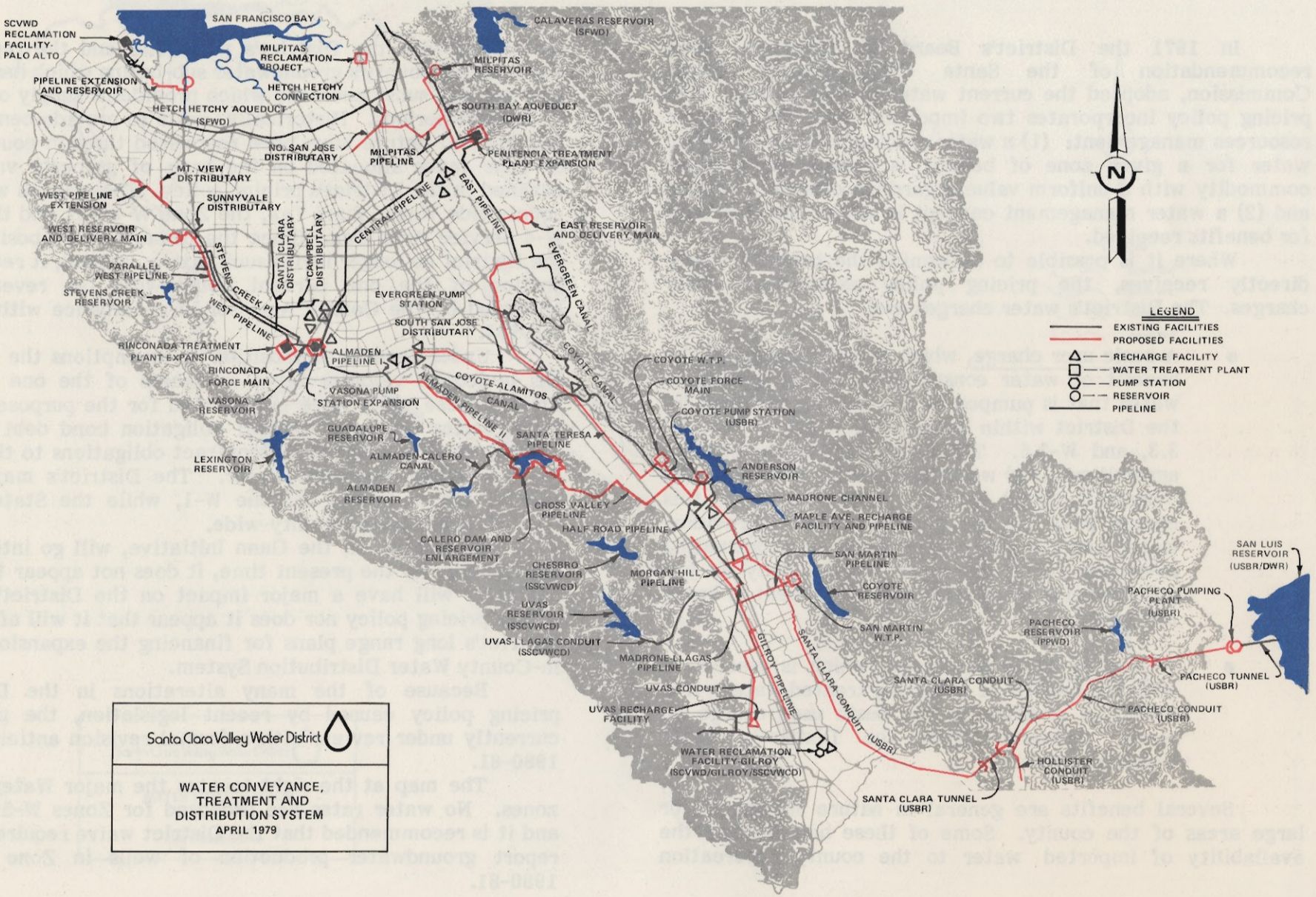
The schedule does not include the construction of an enlarged Calero Reservoir, possible corrective measures for Stevens Creek Dam, or potential modifications to the potable water treatment plants which may be required by as yet undefined future water quality requirements nor are the costs associated with these items included in the expenditure forecasts in this report.

The map on the following page shows the location of the major existing facilities of the In-County Distribution System, the Stage I facilities listed in the proposed construction schedule, and those facilities scheduled for construction in Stage II and Stage III as outlined in the Master Plan.

PROJECTED NEW FACILITY CONSTRUCTION PROGRAM *(Stage I)*
FOR THE WATER UTILITY ENTERPRISE
1978-79 THROUGH 1986-87



. . .Improvement and Expansion



Sources of Revenue...

In 1971 the District's Board of Directors, upon recommendation of the Santa Clara County Water Commission, adopted the current water pricing policy. This pricing policy incorporates two important concepts in water resources management: (1) a water pooling concept in which water for a given zone of benefit is considered a single commodity with a uniform value regardless of source or cost and (2) a water management concept in which the user pays for benefits received.

Where it is possible to determine the benefits a user directly receives, the pricing policy established water charges. The District's water charges are:

- A basic user charge, which is associated with the benefit of water consumption. It is applied to water that is pumped by the user or delivered by the District within Zones W-2, W-3.1, W-3.2, W-3.3, and W-3.5. There are two rates, one for agricultural (Ag) water and one for municipal and industrial (M&I) water. Revenue from this charge pays for the general costs of providing water and for the capital costs of constructing in-county facilities either through "pay as you go" financing or through debt repayment of bonds and loans.

- A treated water surcharge, which is associated with the benefit of receiving treated water. It is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

Several benefits are general in nature serving all or large areas of the county. Some of these benefits are the availability of imported water to the county, recreation associated with the District's reservoirs and the replenishment of the County's groundwater sub-basins which has halted land surface subsidence and which provides a supply of water in drought periods. Historically, costs to provide benefits of this general nature have been recovered through countywide or zone taxes allocated on the basis of property values as outlined in the District's pricing policy. These taxes were the countywide Water Fund Tax, the Zone W-3 Tax and the Zone W-4 Service Area Tax. Since the passage of Proposition 13, the District no longer levies such taxes. Instead, it receives a portion of the one percent countywide tax revenues as allocated by the County Assessor in accordance with Senate Bill 154.

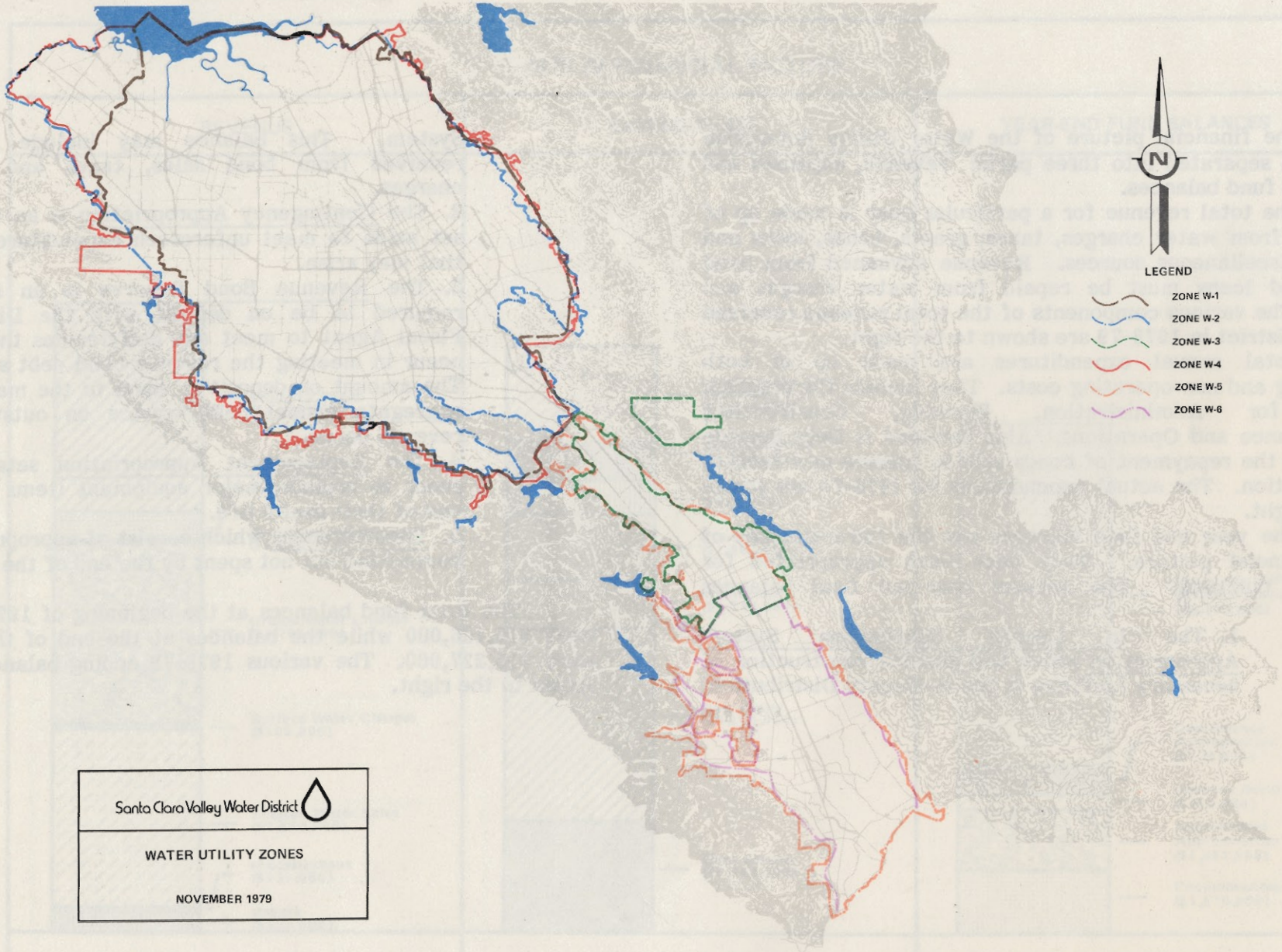
Under specific Proposition 13 exemptions the District has levied ad valorem taxes in excess of the one percent limit. These taxes have been levied for the purposes of a) paying prior approved general obligation bond debt service and b) meeting part of the contract obligations to the State for South Bay Aqueduct water. The District's major debt service tax is levied in Zone W-1, while the State Water Project Tax is levied county-wide.

Proposition 4, the Gann Initiative, will go into effect in 1980-81. At the present time, it does not appear that this initiative will have a major impact on the District's water utility pricing policy nor does it appear that it will affect the District's long range plans for financing the expansion of the In-County Water Distribution System.

Because of the many alterations in the District's pricing policy caused by recent legislation, the policy is currently under review with a formal revision anticipated in 1980-81.

The map at the right locates the major Water Utility zones. No water rates are proposed for Zones W-5 or W-6, and it is recommended that the District waive requirement to report groundwater production of wells in Zone W-5 in 1980-81.

. . .Related to Costs of Providing Benefits



The Financial Picture...

The financial picture of the Water Utility Enterprise has been separated into three parts: revenue, expenses and year-end fund balances.

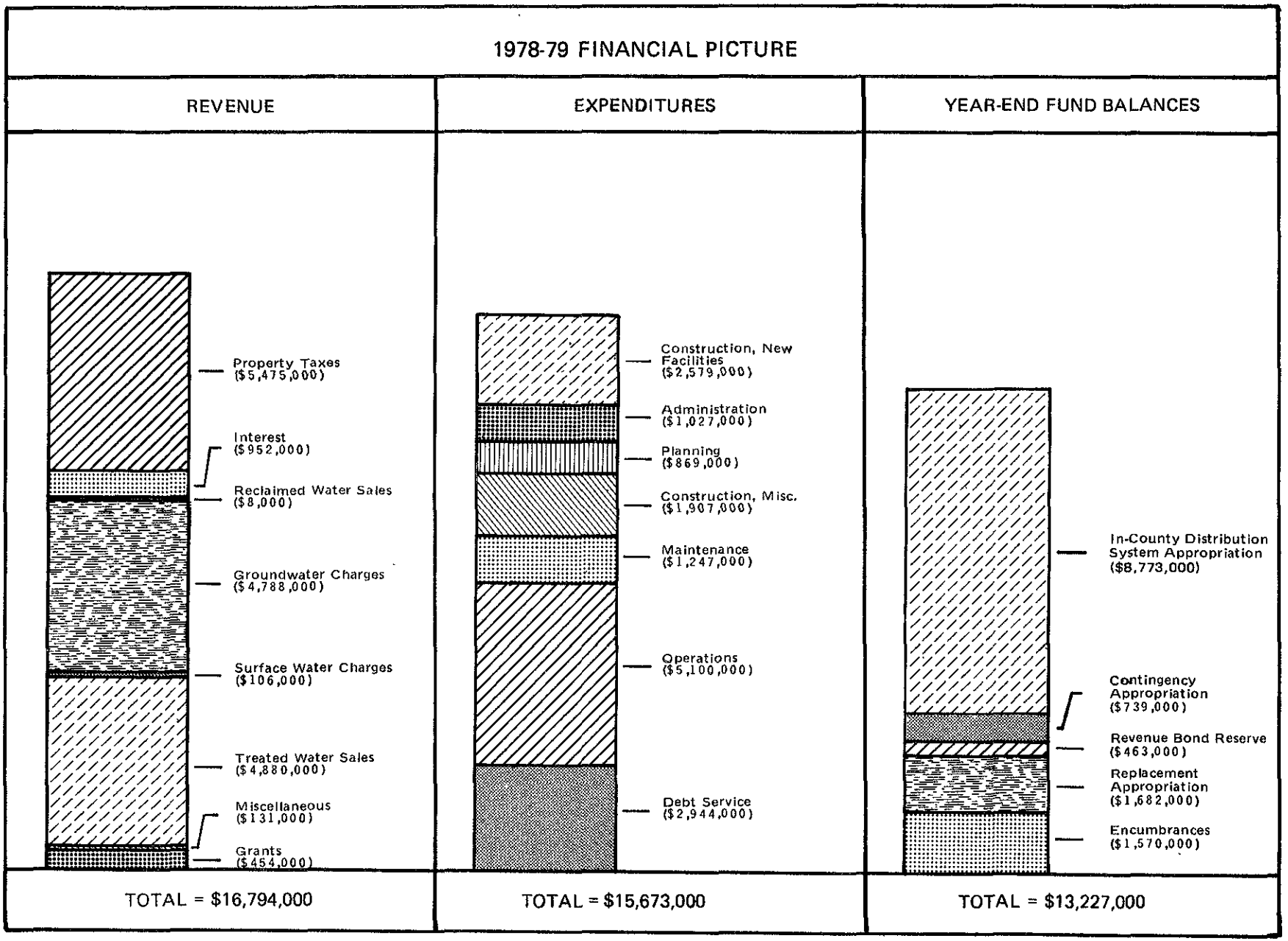
The total revenue for a particular year is made up of revenue from water charges, taxes, grants, bonds, loans and other miscellaneous sources. Revenue advanced from bond sales and loans must be repaid from water charges and taxes. The various components of the total revenue received by the District in 1978-79 are shown to the right.

Total annual expenditures are made up of both operating and non-operating costs. They include the program costs for Administration, Planning, Construction, Maintenance and Operations. Also included is Debt Service which is the repayment of bonds sold to finance new facility construction. The actual expenditures for 1978-79 are shown to the right.

The year end fund balances are the third element of the financial picture. They have been appropriated for specific purposes. The various year-end fund balances include:

1. The In County Distribution System Appropriation which will finance construction of necessary facilities in the In-County Distribution System. This balance may include monies received from bond sales, taxes and water charges.
2. The Contingency Appropriation is an amount set aside to meet unforeseen expenditure needs that may arise.
3. The Revenue Bond Reserve is an amount required to be on deposit with the District's Fiscal Agent to meet any deficiencies that may occur in meeting the revenue bond debt service. The amount on deposit is equal to the maximum aggregate annual debt service on outstanding revenue bonds.
4. The Replacement Appropriation sets aside funds to replace major equipment items at the end of their useful life.
5. Encumbrances which consist of appropriations committed but not spent by the end of the year.

The total fund balances at the beginning of 1978-1979 were $12,106,000 while the balances at the end of the year were $13,227,000. The various 1978-79 ending balances are shown to the right.


1978-79 FINANCIAL PICTURE
REVENUE
Property Taxes ($5,475,000)
Interest ($952,000)
Reclaimed Water Sales ($8,000)
Groundwater Charges ($4,788,000)
Surface Water Charges ($106,000)
Treated Water Sales ($4,880,000)
Miscellaneous ($131,000)
Grants ($454,000)
TOTAL = $16,794,000
EXPENDITURES
Construction, New Facilities ($2,579,000)
Administration ($1,027,000)
Planning ($869,000)
Construction, Misc. ($1,907,000)
Maintenance ($1,247,000)
Operations ($5,100,000)
Debt Service ($2,944,000)
TOTAL = $15,673,000
YEAR-END FUND BALANCES
In-County Distribution System Appropriation ($8,773,000)
Contingency Appropriation ($739,000)
Revenue Bond Reserve ($463,000)
Replacement Appropriation ($1,682,000)
Encumbrances ($1,570,000)
TOTAL = $13,227,000

Financial Estimates...

Estimated revenue, expenditures and year-end fund balances for the current fiscal year are shown in the graph on the opposite page.

The 1979-80 revenue from water charges and water sales is based on basic user charges of $44 per acre-foot for municipal and industrial water and $11 per acre-foot for agricultural water. The treated water surcharge is $41 per acre-foot.

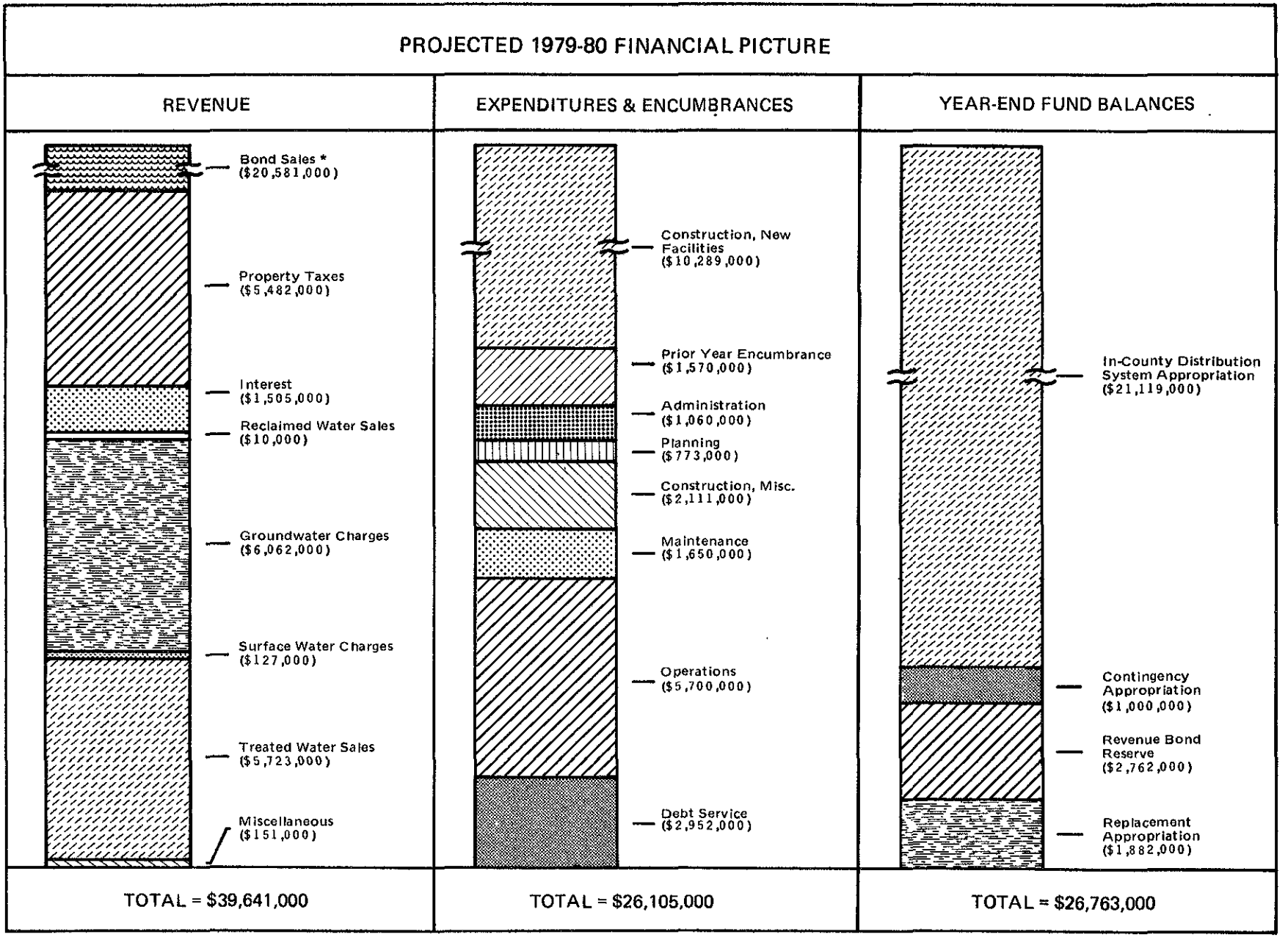
Estimated revenue from property taxes includes income from the one percent allocation under Proposition 13 ($2,295,000), from debt service taxes ($2,383,000) and from the State Water Project Tax ($804,000).

Also included in the 1979-80 estimated revenue is a Series "B" revenue bond sale of $21,000,000 which was sold on April 1, 1980. The interest rate for this sale of 9.48 percent included a 2 percent discount of $419,000; the repayment period is 17 years. Proceeds from this bond sale will be used to finance expansion of the In-County Water Distribution System.

The estimated expenditures in 1979-80 are as shown on the opposite page. The major expenditure for 1979-80 will be for the construction and inspection of the Almaden Valley II Pipeline Phase 1 ($7,610,000) which commenced in the spring of 1980. Additional new facility costs include design of the Rinconada Water Treatment Plant expansion and the construction and inspection of the Cross Valley Pipeline Phase 1 which parallels the South Valley Freeway ($2,516,000). The In-County Credit for Hetch Hetchy water purchases is estimated at $206,000 which reflects a half year payment as the new rebate procedure goes into effect.

The year-end fund balances are also shown at the right. The Revenue Bond Reserve as shown reflects the maximum annual payment for both the Series A and Series B revenue bond debt service.

...for the Current Year (1979-1980)



* Bond sale of $21,000,000 less $419,000 discount.

Financial Projections...

Projected revenue for 1980-81 is shown in the graph on the opposite page. The projected revenue is based on revised basic user rates adopted by the Board of Directors on May 27, 1980. The revised rates are $54 per acre-foot for municipal and industrial water and $13.50 per acre-foot for agricultural water in Zones W-2, W-3.1, W-3.2, W-3.3 and W-3.5. The Treated Water Surcharge rate will remain at $41 per acre-foot.

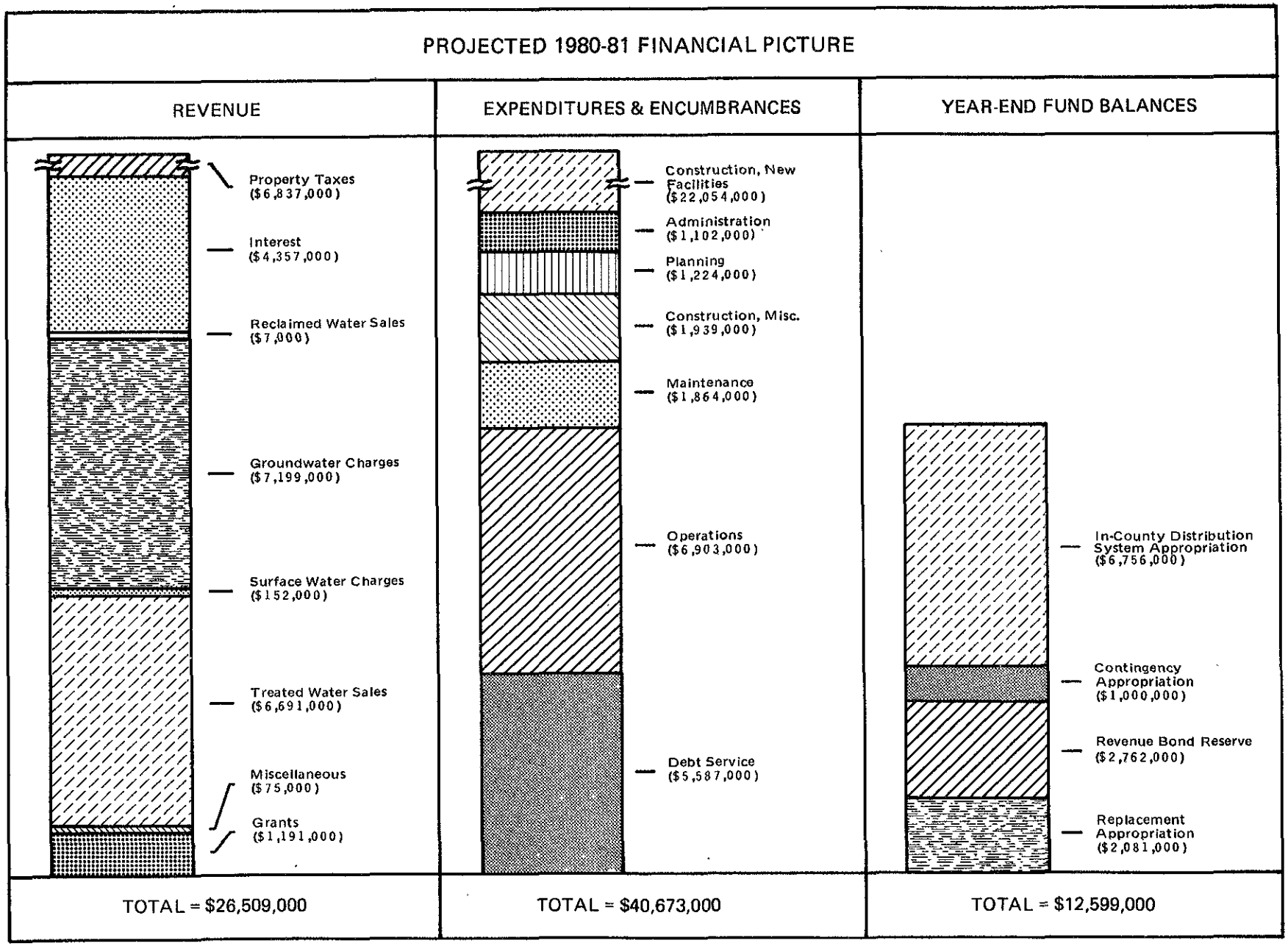
Projected revenue from taxes includes the one percent allocation ($2,472,000), the debt service taxes ($2,490,000) and the State Water Project Tax ($1,875,000). Revenue from the State Water Project Tax maintains the 1:2 tax reliance ratio of taxes to water charges that existed prior to passage of Proposition 13.

Expenditures projected for 1980-81 include costs for operations and maintenance of existing facilities and for design and construction of new facilities. The 1980-81 debt service for the Series A and Series B revenue bonds is estimated at $3,092,000 which includes $330,000 incurred in 1979-80.

Major new facility costs are for the construction of the second phase of the Almaden Valley II Pipeline ($10,251,000), and the second phase of the Cross Valley Pipeline ($10,886,000). Other new facility costs include design costs for Rinconada Water Treatment Plant ($618,000) and site selection for the West Reservoir ($58,000). The In-County Credit for 1980-81 is projected at $412,000.

The year end fund balances are projected as shown to the right.

. . . for the Next Fiscal Year (1980-1981)



Water Charges...

Basic user charges for the 1980-81 fiscal year in Zones W-2, W-3.1, W-3.2, W-3.3, and W-3.5 are summarized in the table below. No basic user charges are proposed for Zones W-5 and W-6, and, it is recommended that the District waive the requirement to report water production of wells in Zone W-5. The countywide *ad valorem* State Water Project Tax will be levied to generate $1,875,000 in 1980-81.[1]

BASIC USER WATER CHARGES[2]
IN ZONES W-2, W-3.1, W-3.2, W-3.3, AND W-3.5
FOR
FISCAL YEAR 1980-81

Basic User Water Charges:	
Agricultural Water (Ag.)	$13.50/Acre-Foot
Nonagricultural Water (M&I)	$54.00/Acre-Foot

1 Adopted by the Board of Directors by Resolution No. 80-41 on May 27,1980.
2 Adopted by the Board of Directors by Resolution No. 80-39 on May 27, 1980.

OTHER RECOMMENDED WATER CHARGES[1] FOR FISCAL YEAR 1980-81

Other charges recommended for fiscal 1980-81 are as follows:

CHARGE	AG WATER	NONAG WATER
Watermaster	$6.50/AF	$6.50/AF
Stored Surface Water	13.50/AF	54.00/AF
Contract Treated Water Surcharge	41.00/AF	41.00/AF
Non-Contract Treated Water Surcharge	16.00/AF	16.00/AF
Gilroy Reclaimed Water	10.00/AF	40.00/AF
Capital Cost - Half Road/ Coyote-Madrone System	2.75/AF	2.75/AF
Power Cost - Half Road/ Coyote-Madrone System	10.00/AF	10.00/AF
Power Cost - Evergreen Distribution System	19.00/AF	19.00/AF
Power Cost - SCVWD Reclamation Plant at Palo Alto	2.00/AF	2.00/AF
Minimum Charge Surface Water	39.00/YR	39.00/YR

Based on the recommended charges, the District's specific water rates will be as follows:

TYPE OF WATER	RATE AG WATER	RATE NONAG WATER
Groundwater	$13.50/AF	$54.00/AF
Surface Water		
Evergreen Deliveries	39.00/AF	79.50/AF
Half Road Deliveries	19.25/AF	19.25/AF
Other Areas	20.00/AF	60.50/AF
Stored Water	13.50/AF	54.00/AF
Minimum Charge	39.00/YR	39.00/YR
Treated Water		
Contract	-	95.00/AF
Non-Contract	-	70.00/AF
Reclaimed Water		
Gilroy	10.00/AF	40.00/AF
Palo Alto*	22.00/AF	62.50/AF

* Under the agreement with the City of Palo Alto, up to one million gallons per day is delivered for landscape irrigation use at a charge of $54.00/AF. In addition, up to 400,000 gallons per day is delivered at no charge for their in-plant use.

1 Adopted by the Board of Directors by Resolution No. 80-40 on May 27, 1980.